NATIONAL TB PROGRAMME

STOPPING THE KILLER

Compiled by

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ACTIONAID INDIA

1997

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&

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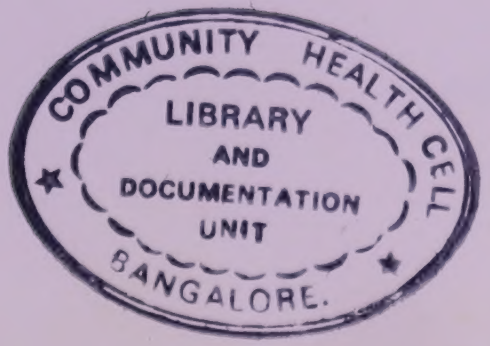

MISSION : ACTIONAID India exists to facilitate the empowerment of the poor in the process of social development.

-ACTIONAID India Mission Statement

ACTIONAID is an international development organisation, dedicated to helping children, families and communities overcome poverty through its work at grass root level, as well as by influencing policies and practices affecting the poor, at national and international levels. Its work is spread across 21 developing countries in Asia, Africa and Latin America. ACTIONAID India commenced its activities in 1972. Today, it is one of the largest NGOs in the country. It works primarily in partnership with about 275 local NGOs throughout the country. Its work is increasingly concentrated in 138 of the most backward districts of the country, mainly in Bihar, Andhra Pradesh, Orissa, Rajasthan, Uttar Pradesh and Madhya Pradesh

The Development Support and Research Division of ACTIONAID India provides techno-managerial support to ACTIONAID's project partners and other development initiatives, facilitates institutional learning through research and documentation, and seeks to share ideas and to network with others towards the realisation of the organisation's mission. The Division has the following units: Health, Education, Livelihood Systems (both Natural Resources Management and non-Farm), and Information Systems.

PREFACE

Literature brought out recently by the World Health Organisation (WHO) Geneva tells us that more people died of Tuberculosis (TB) the world over in 1995, than in any other year in history. Nearly thirty million people are projected to die in the next ten years. Moreover, as TB is widespread and contagious, the consequent suffering and its economic burden are equally widespread. It is true, that at the global level, there is a growing concern of the problem, as well as the need for advocacy. Some of the governments in various countries, including India have also realised the enormity of the problem and taken requisite measures, at the governmental level. In India, for example, a Revised National Programme on TB (RNTP) is emerging as the official response to the escalating TB problem.

However, even though TB is perceived to be a threat at higher levels, there are vast areas of ignorance which pervade the community at large. Not even the local leaders in the community, are fully aware of the importance of TB-symptoms, diagnostic tests and their types, and above all the period of treatment. A study carried out by the Bangalore based Institute of Communication, Operations Research and Community Involvement-ICORCI (1988), for example, found that only 15% of the local leaders in Gujarat, 17% in Tamil Nadu and 30% in West Bengal were aware of the duration of anti-TB treatment, which in any case, was the most vital component of the TB programme. Obviously, considerable efforts at raising the awareness level in the community is called for. How to achieve this, is the challenge.

Studies carried out in Maharashtra, Orissa, and Rajasthan, have shown that radio and printed educational material reached less than 10% of the village leaders. Television had a very small role in this, as it was seen more as an entertainment medium. To top it all, the Central Health Education Bureau (CHEB) has been producing very limited material on TB, in any form!

It should be underscored that interpersonal communication by word of mouth seems to be comparatively more effective and potentially the best approach. For this purpose, Medical officers of Primary Health Centres, the field staff of the health centres as well as non-governmental and voluntary workers at the grassroots, have to be kept well informed and appropriately motivated. They, in turn, could percolate the knowledge and information down to the community, and gradually prime them into involvement and action on a rational basis! Unfortunately, however, material devoted to the grassroots level workers is scarce.

It is in this context that ACTIONAID India has brought out this volume of colourful pictures, supported by relevant text. It is especially designed to equip decision makers at the community level as well as the health workers at various levels. We hope that the ensuing pages of this volume will be useful in fulfilling the information-needs of the people to a large extent. We are aware that the contents should be made available in all the major Indian languages for wider and more meaningful use. We hope to do this soon.

J. Acharya
Director,
Development Support & Research Division.

INTRODUCTION

Tuberculosis is identified as a major killer disease in India. Besides, it poses substantial socio-economic problems to the community at large. In early 1960's, with the active involvement of the World Health Organisation and a few other international health agencies, the National Tuberculosis Institute, Bangalore (NTI) had evolved a programme for its control, which was accepted by the Government of India for implementation in the country as a whole. The blue print of the programme was found feasible for implementation in most developing countries of the world as well. Consequently it has generally been regarded as an acceptable mode of combating the disease.

The key to combating TB, it should be understood, lies in treating the infectious cases in the community to **cure** them. The means by which this could be achieved lies in the hands of people who make decisions for us at various levels: political and opinion leaders, community level workers, administrators, medical and paramedical personnel. All of these people influence the decisions and practice of policies. They, however, need to be made aware what is at stake! At the same time, busy as they are, the process of informing them needs to be short & interesting. **The present publication tries to address this particular need for advocacy.**

In this set of pictorials, an attempt is made to present the National Tuberculosis Programme (NTP), developed in this country. Its key activities along with the rationale are described. Some of the key administrative or other actions, called for in order to support and strengthen the ongoing programme, are also highlighted. The set should be found useful by the District Tuberculosis Officers (DTOs) for a process of self learning, as well as for communicating with private practitioners, doctors working at the Peripheral Health Institution (PHI) and para-medicals. It could, besides, be found useful by the Medical College teachers, in presenting the NTP to the undergraduate students. Different topics, relevant to the needs of a specific group to be trained/ oriented, could also be covered by using parts of the set. For example, for a general orientation of para-medicals, e.g., health visitors & the nursing student groups in nursing institutions, numbers 11-25 could be useful in highlighting the role of nurses and health visiting staff in tuberculosis control.

Other combinations in presentation could likewise be devised suitable to specific group needs.

In telling the story of NTP in a simple & colourful manner in this presentation, it has been the aim to make it as comprehensive and scientifically upto date, as possible. A brief talking point on the material to be discussed with the target group accompanies each picture. Originally available as colour slides, courtesy NTI Bangalore, one could also resort to demonstration through slides.

Surg.Cdr. J.S. Nagra, Director of Health Services, Andaman Nicobar Islands in the late eighties, had lent encouraging support for the project to materialise, in its initial stages. ACTIONAID India has now been kind enough to make this material available for general use! Without their institutional support, the presentation would not have been what it is!

My artist colleague Mr.Swapnesh Choudhury, presently the Curator, "Shaheed Smarak" at Port Blair, had spent innumerable number of hours with me imbibing the spirit of NTP, so that he could see & show through the artist's eyes. He deserves special thanks from all! Both of us had sought & obtained through this work, nothing save for a satisfaction of being useful to the community! If the set of pictorial depiction and the accompanying brief text are found useful, the pains of producing the volume would be worth taking! We thank all those who have made it possible!

"BIKALPA"
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A.K. Chakraborty
Bangalore

THE PROBLEM : MORBIDITY

Tuberculosis in India, as in most developing countries, happens to be a major public health problem, judged from morbidity, mortality as well as from the socio-economic stand point. Prevalence of tuberculous disease is 20 per 1000, of which a fourth are bacillary cases. Though there is some regional variation in the prevalence rates, these are by and large, applicable to the country as a whole.

OF EVERY 1000 PERSONS

20 ARE HAVING LUNG TUBERCULOSIS

1/5 OF THEM CONTAGIOUS

THE PROBLEM : MORTALITY

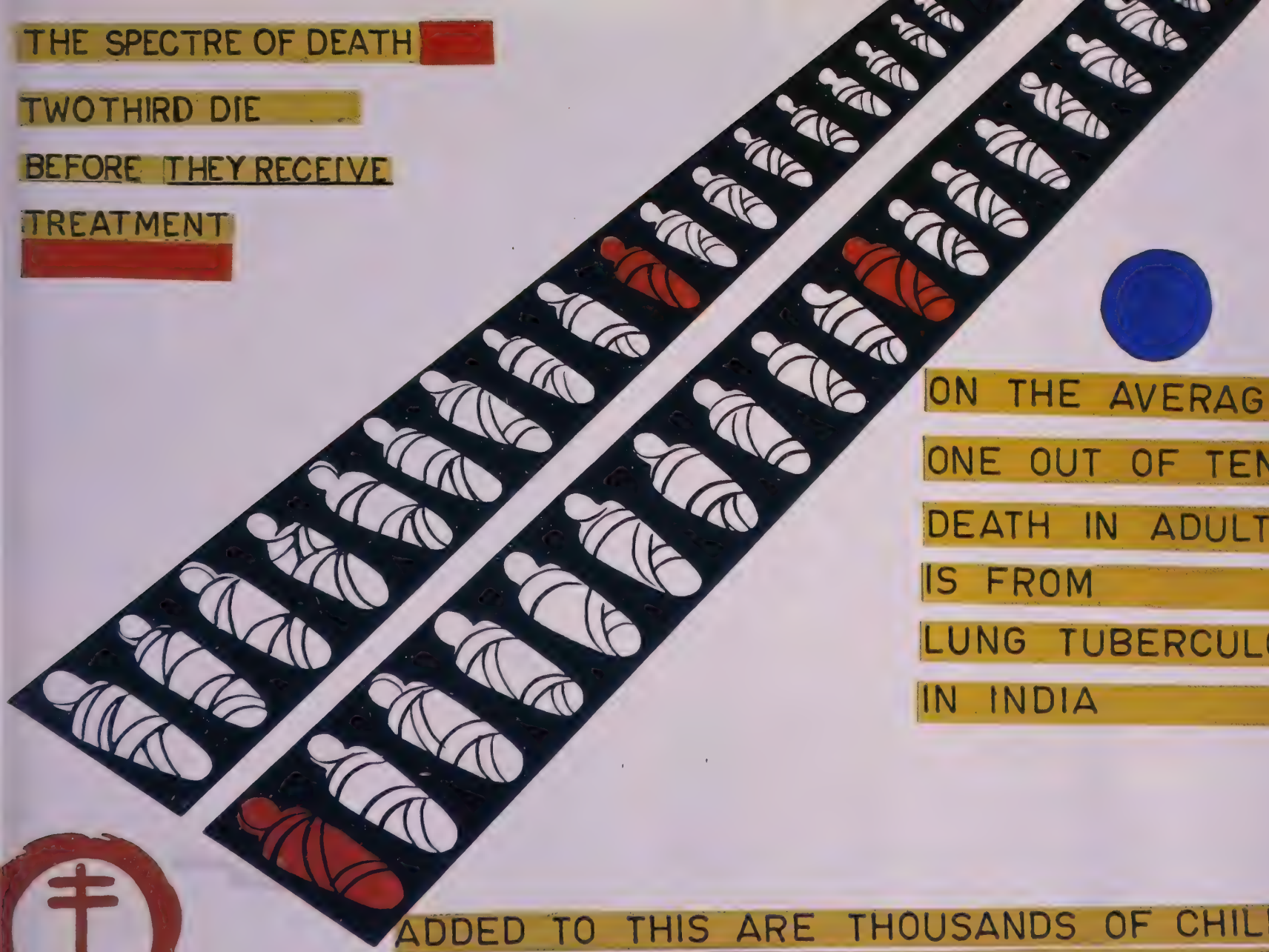
Besides causing considerable morbidity in the population, tuberculosis is also a major killer. Of every 100 deaths due to all causes in the community, 10 are estimated to be due to infectious forms of pulmonary tuberculosis. There could be many more deaths due to tuberculosis in children, of which no estimates are available because of the insurmountable problems faced in the diagnosis of paediatric forms of tuberculosis. As a cause of death, tuberculosis ranks second, and **amongst the infectious diseases taken singly, it ranks as the killer number one**, ahead of other causes of death due to any single agent like malaria etc. Maternal mortality is a subject of much concern to the planners. However, it is realised that **among the causes of death in women in the child-bearing age, tuberculosis is the foremost**. **Even among the men in the most productive agegroup, tuberculosis ranks as the most important killer**, undermining the economic viability of a family. The low key presentation of the disease, protracted and insidious suffering and unobtrusive death, so characteristic of TB, probably contribute together to a failure to generate a more urgent demand for health action from the people, commensurate with the enormous morbidity and mortality wrought upon them by the disease! Some other diseases, without such magnitude of suffering and such an impact on people's lives, are in fact deemed to be far more dramatic and chilling in consequence!

THE SPECTRE OF DEATH

TWOTHIRD DIE

BEFORE THEY RECEIVE

TREATMENT



ON THE AVERAGE

ONE OUT OF TEN

DEATH IN ADULT

IS FROM

LUNG TUBERCULOSIS

IN INDIA

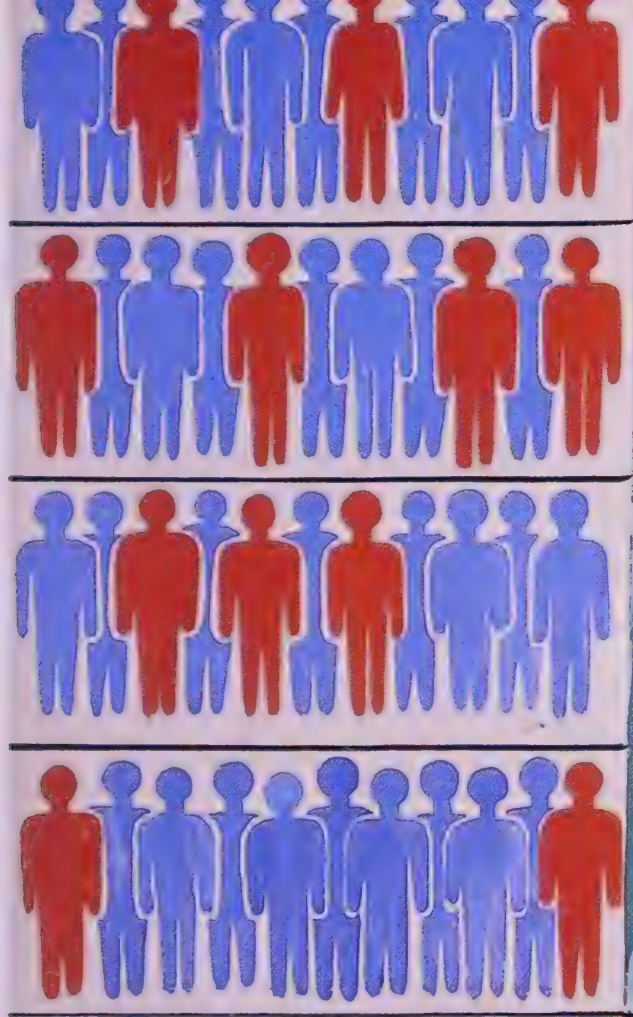
ADDED TO THIS ARE THOUSANDS OF CHILDREN WH

DEVELOP TB. AND MANY DIE FROM MENINGEAL TB

WE HAVE NO ACCURATE ESTIMATE

THE PROBLEM : DYNAMICS OF CONTINUING INFECTION

Tuberculosis is an infectious disease. **The infection is spread by coughing patients who are sputum positive**. If undetected and untreated, a case was found to infect between six and 12 normal persons in the first year and another similar number the next year, after which death supervened. However, in the two years of life, he/she would have left anything upto 24 infected persons in the community, who in course of time, would breakdown to active tuberculosis. It was realised that if the cases of tuberculosis were not detected even when they developed smear positive disease (or, say the symptom of cough), **in the absence of permanent means to find and cure them, the burden of tuberculosis could continue in the form of infected people in the community.**

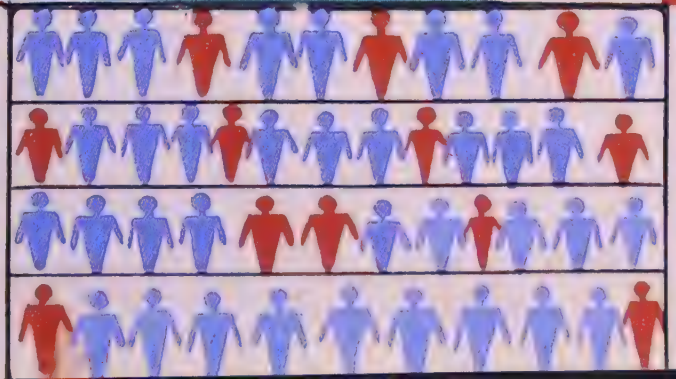


INFECTION SPREADS

BY

SCATTER OF BACILLI

DURING COUGH



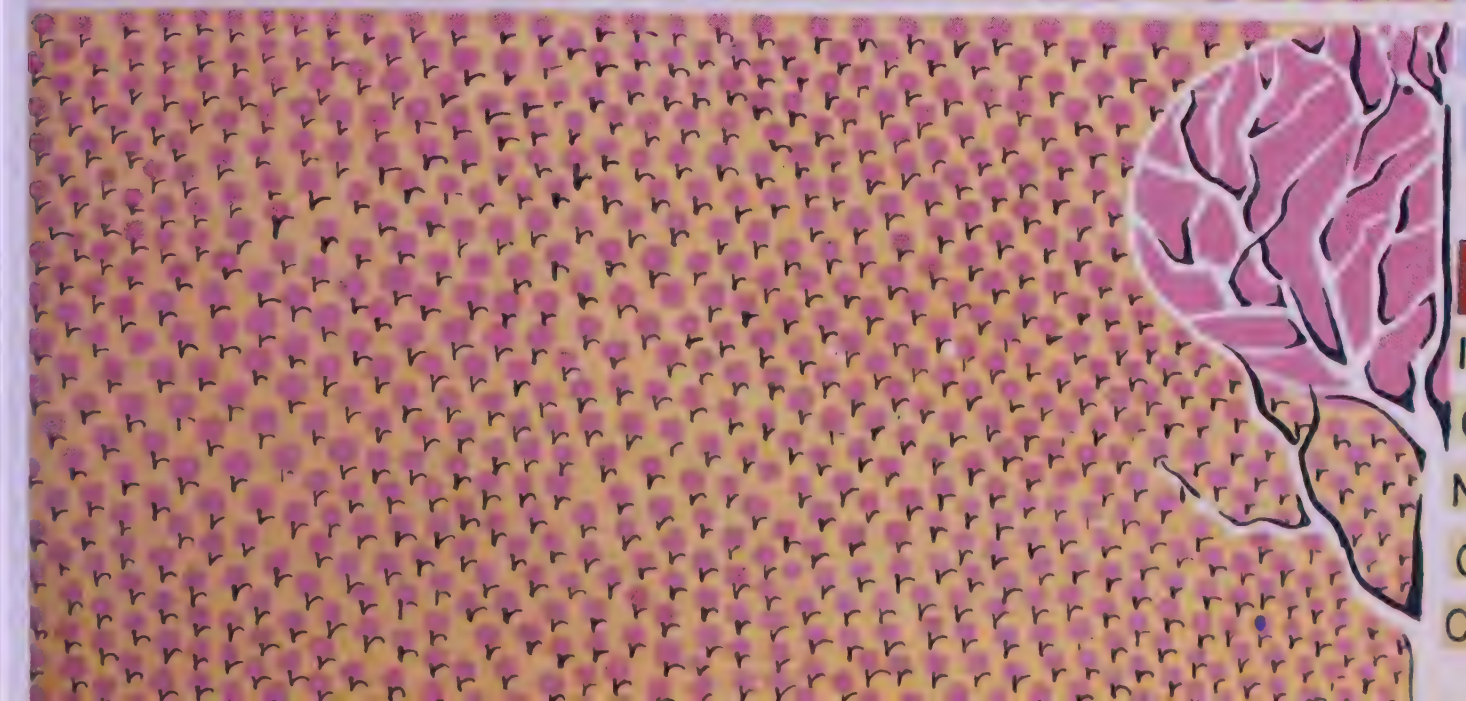
ONE UNTREATED CONTAGIOUS CASE DIES IN TWO YEARS BUT INFECTS ABOUT 12 PERSONS EACH YEAR

THE PROBLEM : BACILLARY MULTIPLICATION

It was also found that once infected, the bacilli were capable of growing fast. One bacillus was capable of reproducing into two, every 20 hours. In 10 days one would grow to 5,000, adequate to cause a lung nodule. In less than a month's time, the number could grow to more than a billion bacilli : enough to cause cavitated lesions.

ONCE INFECTION
LODGES A BACILLUS
REPRODUCES
EVERY 20 HOURS

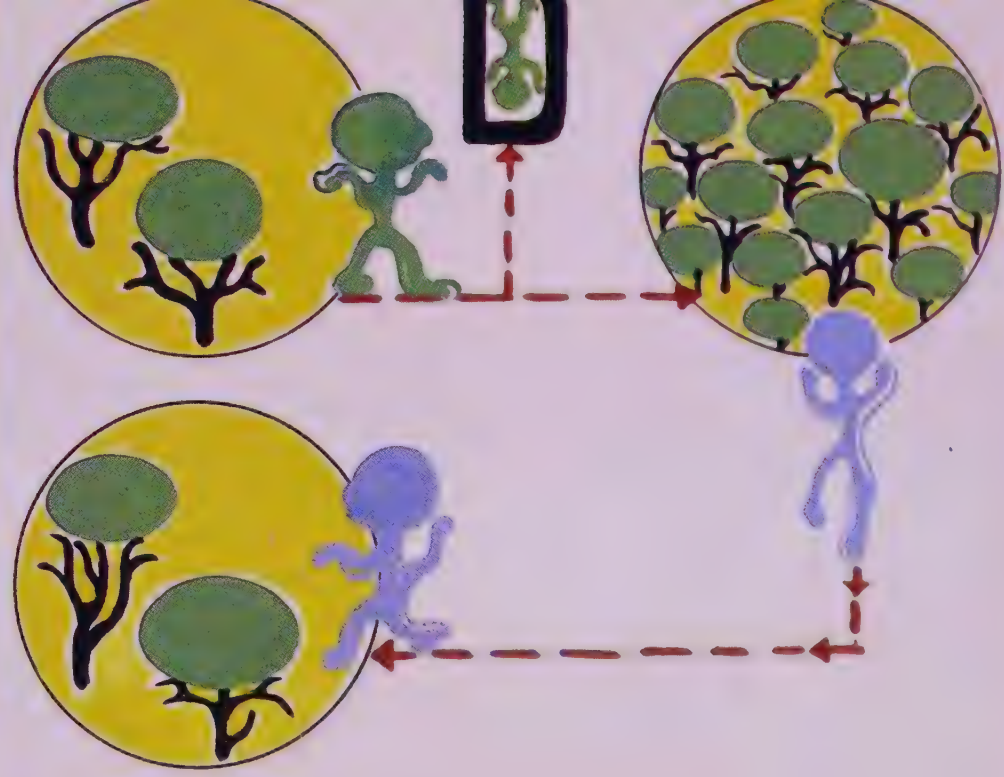
IN TEN DAYS
ONE GROWS TO 5000.
ENOUGH TO CAUSE
LUNG NODULE



IN LESS THAN
ONE MONTH
NUMBER GROWS TO
ONE BILLION
CAUSING LUNG CAVITY

THE PROBLEM : DYNAMICS OF CONTINUING POOL THROUGH REPLENISHMENT

Because of this potential of tuberculosis developing in a rather short interval in general population group considered normal at a given time, the problem is renewed and perpetuated in the community. Information on this dynamics was available from the Longitudinal Surveys of the NTI. Nearly a third of the prevalence cases either died or got cured every year in the normal course when no treatment services were available. However, the same proportion was found to be added to the community from year to year, from amongst the persons who were found to be normal to start with. In other words, the new cases arising in the year's time amounting to a third of the total case-load in the community, would be contributed from the group of persons initially found to be normal on a house to house case-finding.



PROPORTION OF TB CASES
REMAIN SAME YEAR TO YEAR.
EVERY YEAR A THIRD OF
EXISTING CASES EITHER
DIE OR GET CURED

BUT SAME NUMBER JOIN THE EXISTING CASES, AS NEW
HIGHLY CONTAGIOUS CASES, FROM INFECTED PERSONS
TO RENEW AND PERPETUATE PROBLEM

THE PROBLEM : LIKELY ESCALATION WITH TIME

The prevalence rates have not been shown to register any change from the time the National Sample Survey (NSS) was conducted in 1955-58. However, because the population in India has nearly doubled since the National Tuberculosis Programme (NTP) was started in 1962, the **absolute number of cases in the country could be estimated to have doubled in 30 years**. In other words, if there was one India full of tuberculosis in the 1960s, today even without change in the prevalence rate, there could be two India full of tuberculosis as it were. This means, that even at the existing prevalence rates, the resources have to be doubled for tuberculosis control.

30 YEARS

ACTUAL NUMBER OF TUBERCULOSIS CASES

DOUBLED IN 30 YEARS AS

POPULATION DOUBLED

PUBLIC MUST KNOW THIS BUT THEY DO'NT

THE PROBLEM : DISTRIBUTION

Prior to the NSS, it was believed that tuberculosis was a disease of the towns and cities where squalor and over-crowding prevailed. It was thought that rural areas were relatively free. They were, as if, zones of peace and tranquility, in so far as tuberculosis was concerned. The depicition alongside portrays this apparent sense of security and quietitude in the villages. However, the NSS shattered the myth. It was found that tuberculosis was equally predominant in urban as in the rural areas. However, since four times the population lived in the villages than in the urban areas, **the burden of tuberculosis in the rural areas could be 80%, as compared to that of about 20% in the urban areas**. This meant that the resources for control of tuberculosis had to be reallocated proportionately.

NO OF PATIENTS IN RURAL AREAS

FOUR FOLD THAN IN URBAN AREAS

RATES BEING SAME IN URBAN

AND RURAL AREAS

CASE-FINDING BY SURVEY APPROACH : FEASIBILITY

The above spatial distribution of tuberculous disease also underlined the key factor to be solved in the control of tuberculosis. Tuberculosis was predominantly a rural problem. Cases had to be found where they were i.e., in the rural areas and not where most of the specialised clinics existed at that time, i.e., the urban areas. How to diagnose and treat all these cases distributed in the rural areas, where virtually no diagnostic facility in the form of TB Clinics existed!. One possibility was to go from house to house in the rural areas (as also in the urban areas) with specialised personnel and MMR/other equipments in tow to find the cases in their homes. Even on the face of it, owing to the vast amount of resources in men, material and money required for country-wide operation, it did not appear to be a feasible method. However, the NTI tried the approach in 1960s. **Even when specialised workers with diagnostic tools visited all the houses in the rural areas, they could detect only about a third of the existing cases**. It appeared that tuberculosis patients who had no symptoms, mostly stayed away when the teams visited the villages. Moreover, it was realised that a team would probably take a decade or more to return to the village for repeating the house to house case-finding operations and so on. (Provided that for 1.5 million population size of a district, two teams worked separately and would cover about 400 persons per day, working at a furious pace and without trying to conduct absentee examinations at that!)

HOW TO FIND AND TREAT THEM?

GOING FROM HOUSE TO HOUSE?

ONE WOULD ONLY DIAGNOSE ONE THIRD BY SURVEY METHOD. IF AT ALL POSSIBLE TO IMPLEMENT ENORMOUS MANPOWER, MONEY, TRANSPORT, EQUIPMENT, LOGISTICS REQUIRED

CASE-FINDING BY SURVEY APPROACH : INCIDENCE CASES

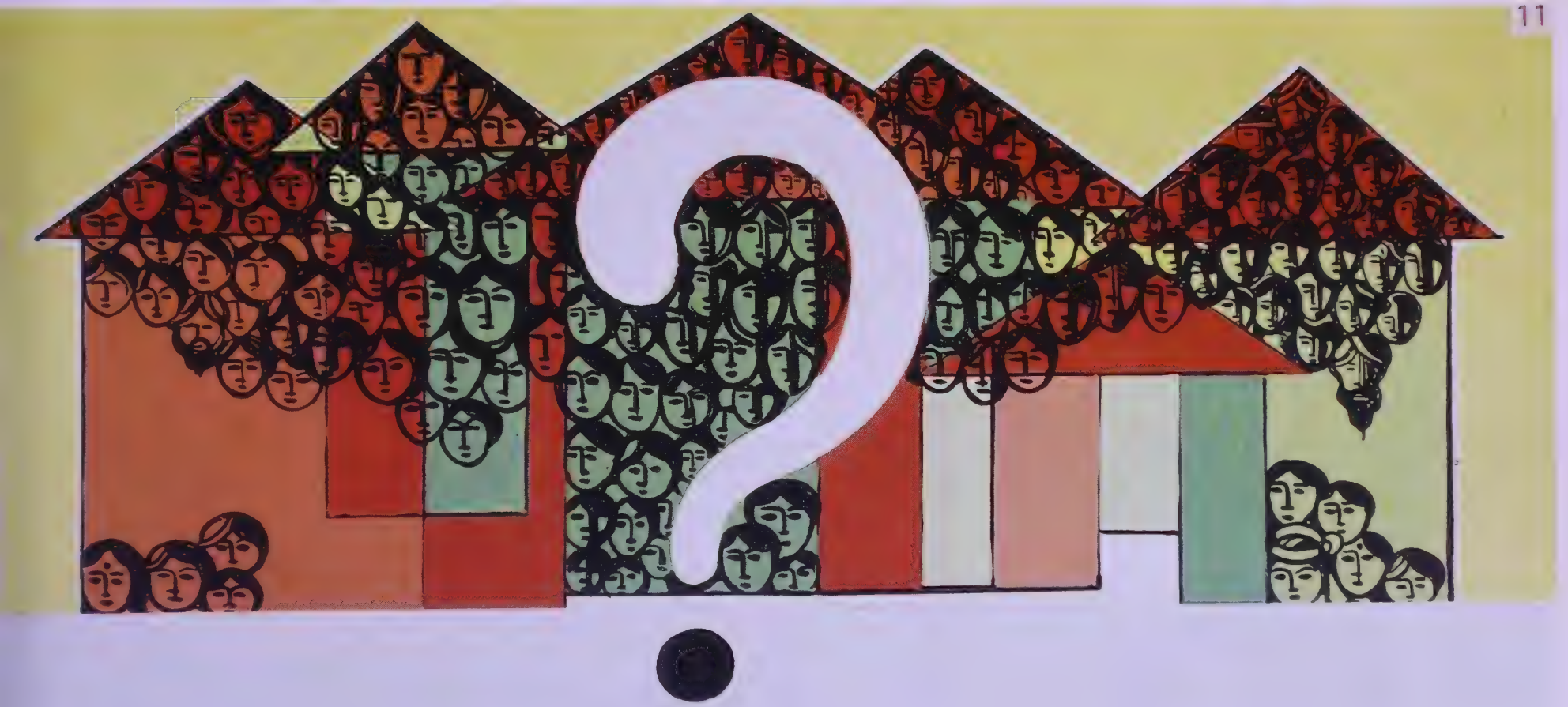
From all these, it was reasonably clear as to what would possibly happen when a mobile team was used for case-finding by visiting a village. It would detect at the most, a third of the existing cases. There would be no organisation to treat them. Further, of the persons declared as normal, a large proportion could develop active tuberculosis in a short time thereafter. Many of them would be dead and gone before the next mobile team was able to repeat its visit to the village. **The undetected cases, in their turn, would leave their imprint in the form of infected people in the community.**

BETWEEN
ONE TO NEXT
SURVEY

THEN TOO, NEW CASES KEEP ON POPPING UP BETWEEN ONE TO NEXT SURVEY. DEVELOPING FAST AND EVEN MAY BE DEAD AND FORGOTTEN, BEFORE ANY NEXT VISIT IS POSSIBLE.

CASE-FINDING : SEARCH FOR A SOLUTION

It was thus obvious that the answer to the problem was not the so-called 'active' case-finding approach through mobile units, for technical reasons alone, if not also on the grounds of resources and feasibility, as pointed out earlier. **The problem therefore remained, how to diagnose and keep on diagnosing all these cases in the rural areas, where diagnostic facilities were not present**. This question was pursued by the NTI in right earnest, through a series of research.



HOW TO DIAGNOSE ALL THE VAST NUMBER OF PATIENTS DISTRIBUTED IN URBAN AND RURAL AREAS, FOUR TIMES IN RURAL AREAS — AND ALSO KEEP ON DIAGNOSING THEM?

CASE-FINDING : THE AVAILABLE INFRASTRUCTURE

Fortunately even at that time, there were large number of PHIs throughout the country in the form of Primary Health Centres (PHCs) (currently, one for every 30,000 persons). There were also numerous dispensaries run by non-governmental agencies.

FORTUNATELY

50,000

PHC-S

ONE FOR 20,TO 30,000 PERSONS

AND

LARGE NUMBER OF SUBCENTRE,

DISPENSARIES

ONE FOR 6-8000 PERSONS

EXISTS

CASE-FINDING PROBLEM : SOCIOLOGICAL CLUE TO SOLUTION

The NTI during the course of its operations research, came upon the finding that most patients of tuberculosis were aware of their symptoms (95%). It was only a small percentage of patients who were oblivious of these (5%). Of course, the awareness had several levels; 50% were themselves reporting to the general health services wherever they existed in the rural areas ("Action-taking"). Another 30% or so were aware of the symptoms but were so indifferent that they were not taking action to get relief ('worry-awareness'); a small percentage of 15% or so were aware of the symptoms but were not taking action nor contemplating one (simply aware). **From this, it was clear that half of the patients were actually visiting the governmental health institutions in search of relief.**

AWARE

UNAWARE

AND ACTION TAKING (50%)

AND ONLY WORRIED (30%)

BUT INDIFFERENT (15%)

(5%)

MOST PEOPLE ARE AWARE AND ATTEND THESE MEDICAL FACILITIES

THE SOLUTION : IN PRINCIPLE

Thus to sum up, the patients were found to come to the health institutions on their own for diagnosis. There was no need to visit them at their homes to find them. **The health intervention required was to equip the available health institutions with diagnostic tools** as simple as microscope, **provided the patients diagnosed could be treated**.

STRATEGY IS TO

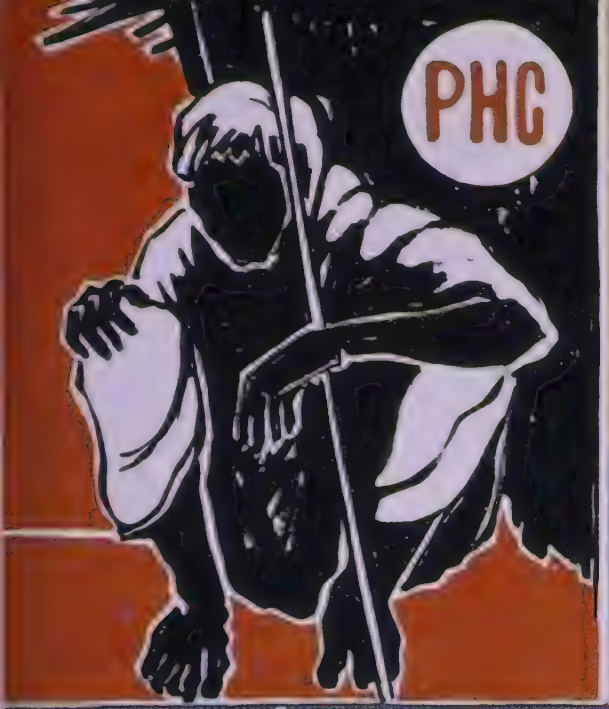
DIAGNOSE AND TREAT

WHEREVER THEY ATTEND AS SOON

AS SYMPTOMATICS REPORT

THE SOLUTION : LACUNA IN IMPLEMENTATION OF IDEAS

Even though it was as simple as that, the facilities in **actual fact, were available neither for diagnosis nor for treatment at the PHIs** way back in the 1960s, causing frustration among self-attending patients. Either the doctor was not aware that it was within his technical competence to diagnose and treat the patients or that he was being thwarted by the absence of a simple microscope or microscopist at his centre.

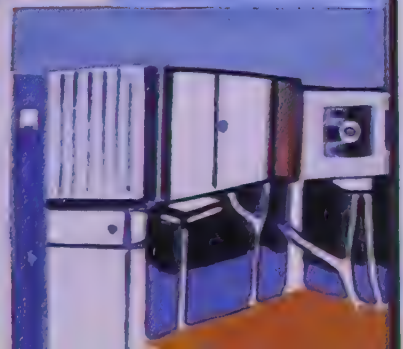


- SADLY,
- PATIENTS ATTEND
- BUT
- NOT DIAGNOSED/ TREATED

- DOCTOR NOT CONVINCED ABOUT HIS ABILITY
- SIMPLE MICROSCOPY FACILITY LACKING
- DRUGS NOT THERE

THE SOLUTION : ITS IMPLEMENTATION

However, the fact then still remained that, provided the facilities for diagnosis and treatment at the PHIs and the requisite knowledge and motivation among the staff were available, **it was possible to diagnose and treat a substantial proportion of tuberculosis patients right at the periphery.**



BUT FACT IS THAT

PATIENTS CAN BE

FOUND AND TREATED

IF MICROSCOPY IS DONE

DRUGS AVAILABLE

SUPPLIES OF STAINS,

EQUIPMENTS MAINTAINED

THE SOLUTION : ENSURING CONTINUITY

To maintain this activity, apart from ensuring the supplies, the other requirement was to see that the **PHI staff were kept trained** and motivated.

MOST INFECTIOUS CASES CAN BE DIAGNOSED EVEN IN OUTLYING AREAS :
IMPARTING SIMPLE TRAINING TO TECHNICIANS,
PROVIDING MICROSCOPE AND STAINS

TREATMENT : AMBULATORY Vs INSTITUTIONAL

The question then was whether patients diagnosed would require hospitalisation for effective treatment. It was found that **patients treated** regularly and adequately **were found to get "cured", irrespective of the place of treatment - home or sanatoria.....**

TREATMENT

AT HOSPITAL

OR HOME

EQUALLY

EFFECTIVE

NO MATTER PATIENT RICH OR POOR

---AND---

"Cure" would not depend on patients belonging to upper or lower income groups or on their place of residence, urban or rural - as long as they would continue the treatment prescribed.

TREATMENT
AT HOSPITAL
OR HOME
EQUALLY
EFFECTIVE
NO MATTER
PATIENT
RICH OR POOR

TREATMENT : COLLECTION/SELF-CONSUMPTION OF DRUGS

It became apparent that for treatment to be taken at home, the patients would only need to come to the PHC/other treatment centres once a month to collect the prescribed drugs, which they were required to consume at home daily on their own.

AND

ORAL DRUGS CAN BE TAKEN AT HOME

PROVIDED DRUGS ARE REGULARLY

SUPPLIED NEAR HOME AND FREE

TREATMENT : ADMINISTRATION/UNDER 'DOTS' SYSTEM

However, for success of ambulatory treatment, the patients need to take their drugs regularly. Experience shows, that for various reasons, supervision of drug intake is necessary for patients to complete their treatment regularly. In the recent times, with the introduction of intermittent short course chemotherapy (**SCC**), **it is advised that each dose of the drugs, in the intensive phase of two months treatment period, is administered under supervision of trained health workers. (Directly Observed Treatment with Short Course or DOTS)**. For treatment for four more months under continuation phase, patients need to come to PHC/other treatment centres once a fortnight to collect the prescribed drugs. They could consume them at their homes on their own. Treatment results are monitored regularly.

AND

DRUGS CAN BE ADMINISTERED TO PATIENTS DIRECTLY BY HEALTH WORKERS FOR THE INITIAL TWO MONTHS OF A TOTAL SHORT COURSE OF 6 MONTHS DURATION.

REMAINING 4 MONTHS CAN BE TAKEN AT HOME

- DRUGS ARE SUPPLIED FREE
- PATIENTS COME & COLLECT THESE AT HEALTH CENTRES NEAR HOME

TREATMENT : ROLE OF ISOLATION

Added to that, came the revelation that it did not really matter whether patients were treated in sanatoria or at home, in so far as the danger to the contacts was concerned. In other words, even if the patients were isolated and treated in the hospitals, they would leave as many infected among the contacts, as when they were treated at home. It was presumably the delay in diagnosis which caused all the damage to household contacts before treatment could be instituted. However the remarkable effect of the drugs in cutting down bacillary transmission, within a few days of introduction of treatment, could immediately achieve what physical isolation could not possibly have improved upon.

DOES ISOLATION AWAY FROM HOME HELP IN PREVENTING INFECTION TO IMMEDIATE CONTACTS?

NO

INFECTION TO IMMEDIATE CONTACTS AT HOME AND WORK PLACE ALREADY TAKES PLACE BEFORE DIAGNOSIS ITSELF

COMMUNITY HEALTH CELL
LIBRARY AND DOCUMENTATION UNIT

TREATMENT : THE DOMICILIARY SOLUTION

If, as shown in the above studies, treatment of tuberculosis could be as effective in the indoor wards of hospitals or sanatoria as at home, why should people suffering from tuberculosis be made to line themselves up for seeking admissions to a few beds that were available (about 30,000 beds in the entire country for eight lakhs tuberculosis patients in 1960s)? It was utterly illogical. Therefore, **the alternative, which was also equally effective, was to treat the tuberculosis patients at home**.

THEN
WHY LAKHS SHOULD DIE
AWAITING A CHANCE TO OCCUPY
HOSPITAL BEDS? IS IT POSSIBLE,
IS IT NECESSARY?

TREATMENT : ROLE OF HOSPITALS

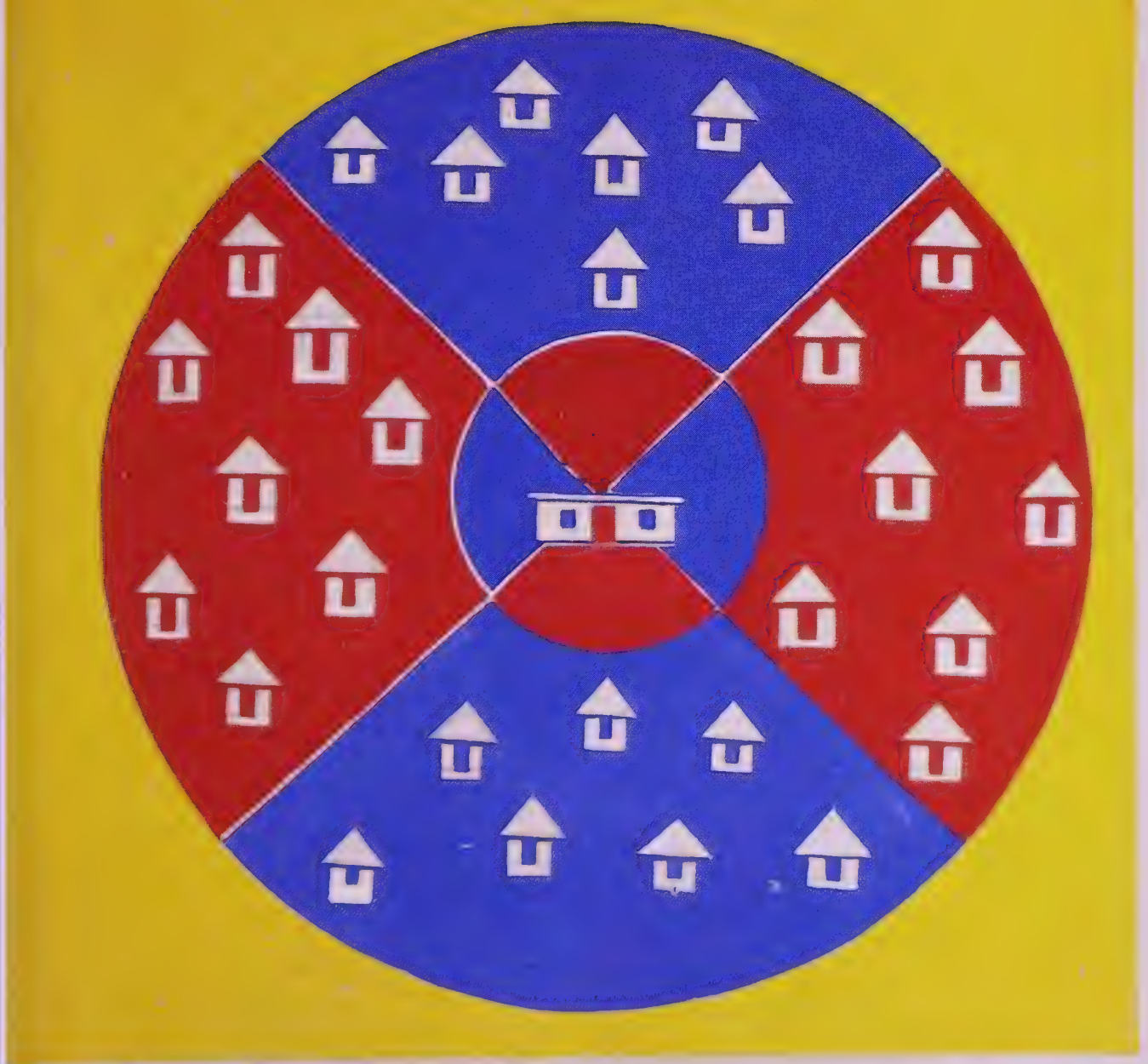
However, a few beds that could be made available at every district place, were to cater to emergencies. Surgery could only be done at a few referral hospitals.

ONLY A FEW BEDS IN DISTRICT PLACES FOR

EMERGENCIES MAY BE ENOUGH

DTP : AS A SYSTEM

As a consequence of all these epidemiological, behavioural and operational studies in diagnosis and treatment, the DTP was developed. A district co-ordinating agency, called the District Tuberculosis Centre (DTC), manned by NTI trained staff, is provided at every district (key staff)). All the available PHIs are visited by the key staff, when the personnel at these centres are given the knowhow on diagnosis and treatment and supplies of microscope, stains and drugs are made (implementation). All the PHIs, with a reasonable patient attendance, are engaged to diagnose the tuberculosis patients among the chest symptomatics as well as treat them locally. Monthly Reports are sent by these centres to the DTC. The DTC staff, removes the lacunae in the procedural knowledge that they may come across, during their visits to the PHI-s, corrects the methods followed and ensures regular supply of drugs, cards and forms (supervision). **This is how all the PHIs together are involved in contributing towards the diagnosis and treatment of tuberculosis throughout the district, under one single programme in an integrated manner**. The DTO has to facilitate and monitor the activities from the district level.



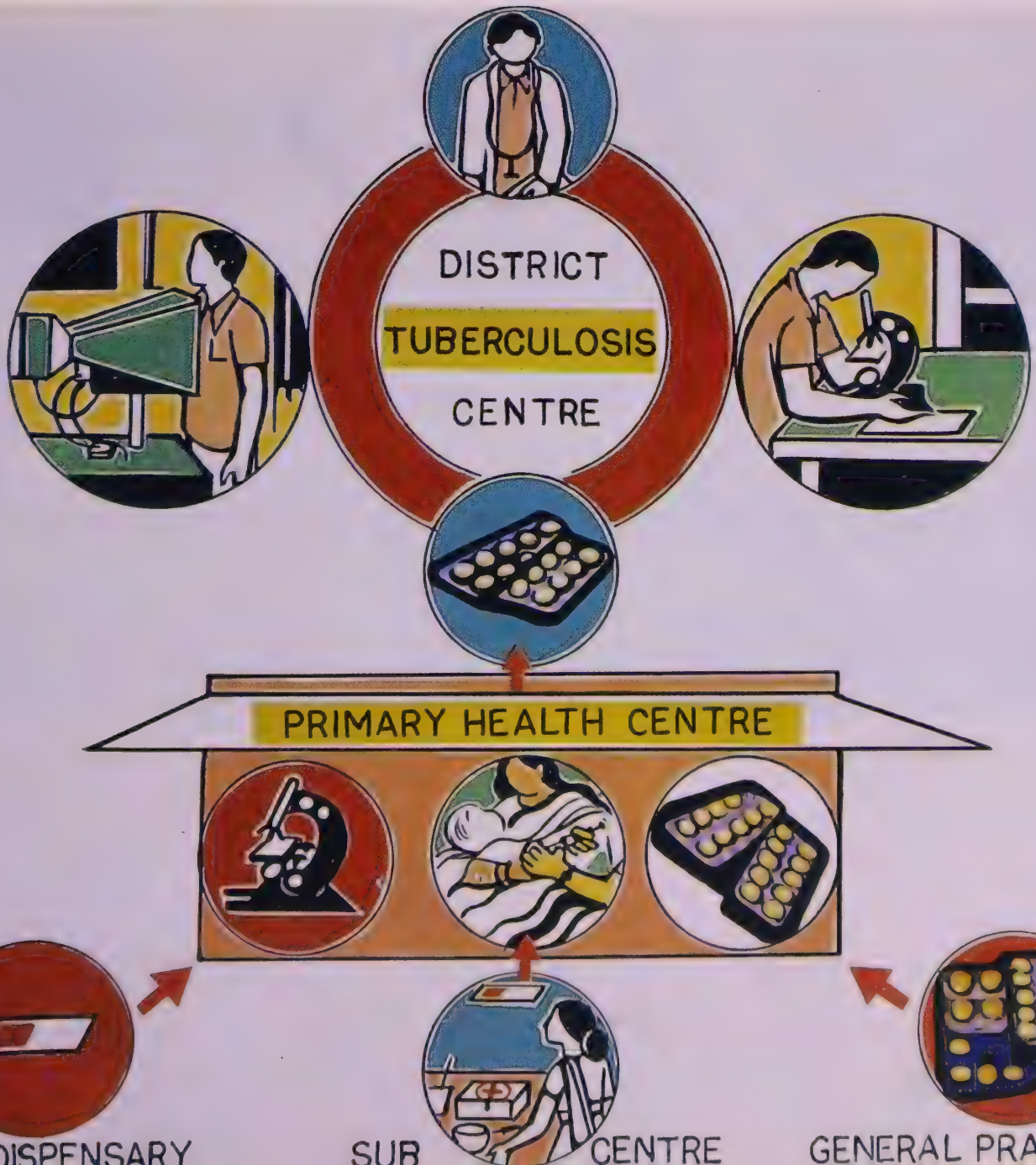
DTC

PHC

THUS THE ANSWER IS TO EQUIP EXISTING DISPENSARIES/ PHC/SC WITH A CENTRAL COORDINATING CENTRE AT DISTRICT

DTP : ACTIVITIES

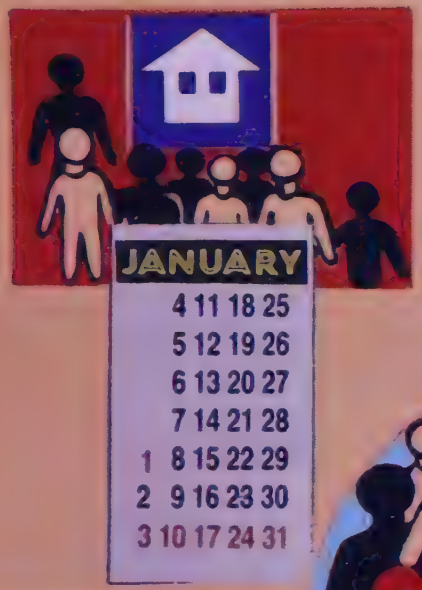
At the district level, the DTO is the co-ordinating authority as well as the senior-most specialist in tuberculosis. His services could be utilised by PHI doctors for advice regarding complicated cases. At the DTC, he has under him, facilities for microscopy, X-ray and treatment. The key staff of these centres are trained at NTI. They are all available to tour the PHIs for implementation/supervision, apart from maintaining the sections at the DTC for rendering services as well as imparting advice in cases of referral. There is also a statistical section to receive and compile the report and advise the DTO on the performance of the programme. At the health institutions where there is a microscope, the activities of diagnosis, treatment and BCG Vaccination are organised, the last under the Universal Programme of Immunization. These are called the **microscopy centres**. There could also be centres where no microscopy is available, but the doctor is present. Slides are made at these centres and despatched to the PHIs for microscopy. On receiving the result, the patients are put on treatment. These are called **referring centres**. Centres with microscopy as well as X-ray facilities, where patients can be diagnosed and treated, are called **x-ray centres**. Under the newly introduced DOTS-strategy, a system of subdistrict level supervision, through **Tuberculosis Units (TU)**, is organised, with a senior laboratory and a programme supervisor covering a population of 500,000.


DISTRICT
TUBERCULOSIS
CENTRE
PRIMARY HEALTH CENTRE
HEALTH DISPENSARY
SUB
CENTRE
GENERAL PRACTITIONER

DTP : PROBLEMS IN MAINTENANCE AND CORRECTIVE ACTIONS

Through this network which constitutes the DTP, it is possible to diagnose and treat patients throughout the district. But the problem is that, till recently, the period for which the anti-tuberculosis drugs are to be administered, is too long (6 to 12 months). A patient has to come every month to the centre to receive drug supply. He often defaults in doing so. However, based on experience, it is considered that the treatment centres should be as near to the patients' home as possible: so that the patients do not have to travel long distances. There should be timely, and if necessary repeated, reminder services to the patient: calling upon him to collect his drugs if he has failed to do so. There should be a machinery to retrieve a defaulting patient and motivate him by apt counselling. **Of course, free supply of drugs should be regularly available in order to ensure that patients remain on treatment.** It is also necessary that centres on the whole, are considered user-friendly by the patients themselves. The image of the diagnostic and treatment centres can be improved by not only rendering anti-tuberculosis services to visiting tuberculosis patients, but by listening to and advising them on complaints other than tuberculosis.

In the DOTS system, currently being introduced, additional supervisory arrangements have been organised to ensure cure for every patient.



BUT TREATMENT PERIOD IS TOO LONG

12

18

DISTRIBUTE TREATMENT FACILITIES ALL OVER

TIMELY REMINDER AND RETRIEVAL SERVICES

MONTHLY COUNSELLING AND MOTIVATION

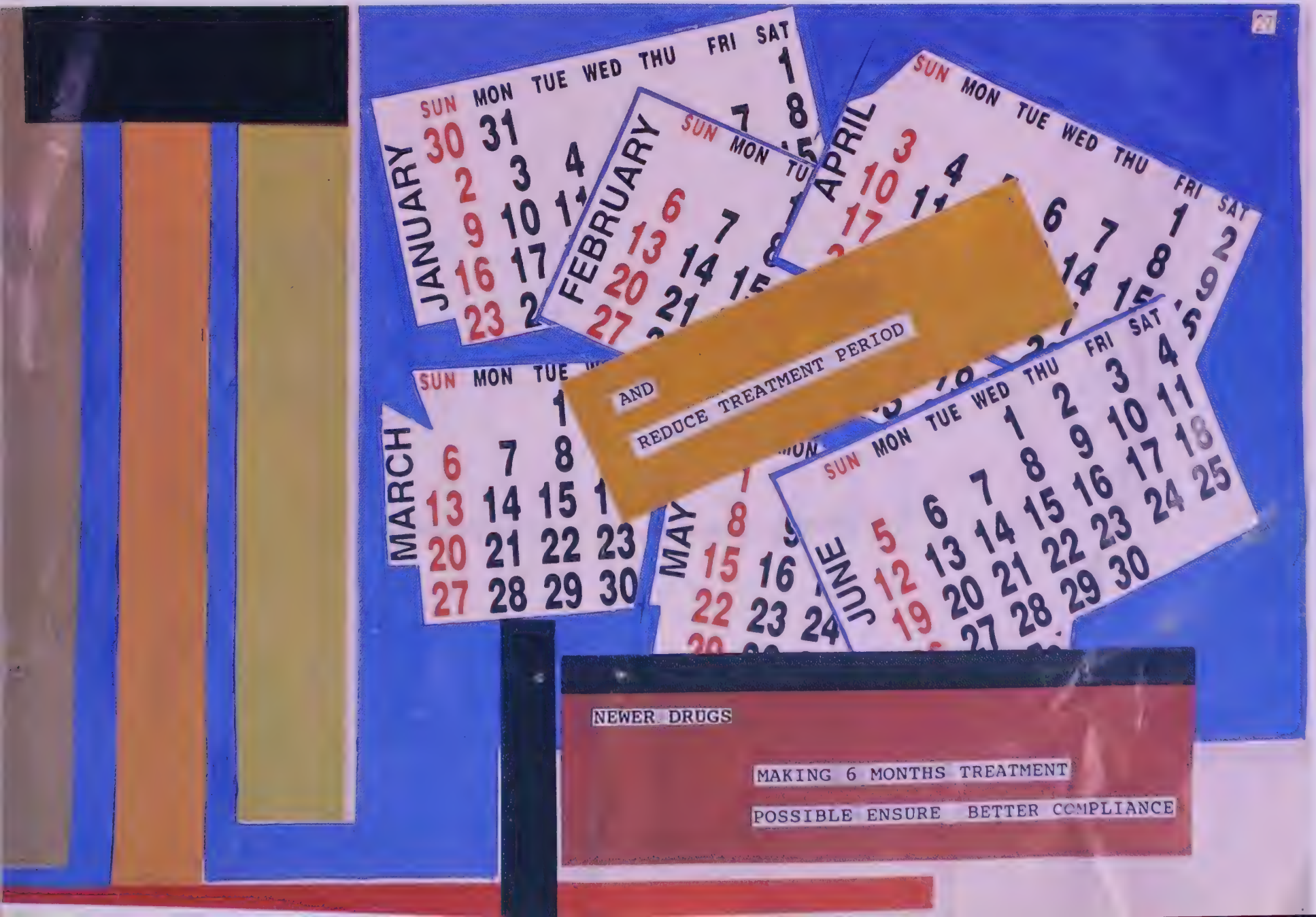
REGULAR FREE DRUG SUPPLY

IMPROVE SYMPTOMATIC TREATMENT AND GENERAL MEDICARE

TO OBTAIN HIGHER COMPLIANCE

DTP : PROBLEM IN MAINTENANCE AND CORRECTIVE ACTIONS (Contd..)

As brought out earlier, one of the reasons for non-compliance is the length of treatment period. Researches are therefore on, how to reduce this. Presently, treatment regimens of shorter duration are available under the programme: Short Course Chemotherapy (SCC), under which patients are to be on treatment for six to eight months. However, it is to be realised that no short course regimen is short enough. It is not like the treatment of STD or malaria, wherein a few days of treatment would suffice. In any case, no treatment of tuberculosis is for a duration of less than six months. **The problem of case-holding for such a long period therefore, remains the crucial issue**. 6month intermittent treatment with SCC under supervision, fortunately, has come as the solution. Arrangements are under way to organise a system in India to deliver treatment under direct supervision of health workers.


JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
SUN MON TUE WED THU FRI SAT
AND
REDUCE TREATMENT PERIOD
NEWER DRUGS
MAKING 6 MONTHS TREATMENT
POSSIBLE ENSURE BETTER COMPLIANCE

BCG VACCINATION

BCG Vaccination is no longer seen to be preventing the development of bacteriologically positive disease. Therefore, it appears to have no role in the programme. However, because of its effectiveness in dealing with haematogenous forms of tuberculosis (paediatric tuberculosis), vaccination is given under the universal immunisation programme. **Children are vaccinated at birth institutionally in cities and towns; or within one year at their homes in the villages by the Multi-Purpose Workers (MPWs)**.

IMMUNISE CHILDREN

BELOW 1YEAR WITH

BCG

IN HOSPITALS AT BIRTH

OR

AT HOME BY

HEALTH WORKERS

OTHERWISE

TENS OF THOUSANDS

MAY HAVE MENINGITIS

AND DIE

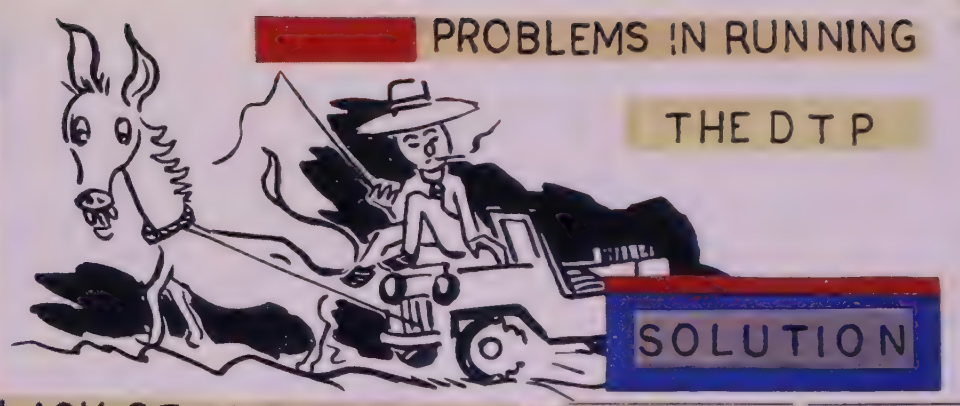
DTP : ADMINISTRATIVE SUPPORT

Apparently simple in working, the **DTP has to be maintained through the requisite administrative support at all times, so that it can render continued service in an integrated manner**. The problems facing the DTP may either be seen to be at the administrative or functional levels.

At the administrative level, there could be lack of continued advocacy, paucity of resources due to lowering of priority for the anti-tuberculosis services, a lack of co-ordination or simply a case of a few health programmes competing with each other for resources and priority allocation. These could be tackled by the National Level Programme Director at the Ministry of Health, State Tuberculosis Officer (STO) at the state level and the DTO at the district level, through a process of continued programme advocacy. They should constantly be interacting with the respective senior health administrator (Secretary Health/Director of Health Services/District Health Officer). These senior health administrators are already oriented to the concept of **Heath for All. Tuberculosis programme - Co-ordinators at the respective levels, have to present the anti-tuberculosis activities to them, within this framework.** They have to be apprised of the seriousness of the problem, effectiveness of the programme in hand, operational problems as well as of the outcome of recent operational researches on the programme and the need for their application. The technical managers like STO and DTO can only succeed as a part of the system. **The general health administrators have the overall responsibility** for programme delivery.

At the functional level, the programme should be seen as one among other routine duties of the PHIs and as a part of general health service delivery.

PROBLEMS IN RUNNING THE D T P



SOLUTION

LACK OF COORDINATION

LOWERING OF PRIORITY

COMPETING RESOURCES

MAINTAIN PRIORITY

BY CONSTANT MOTIVATION

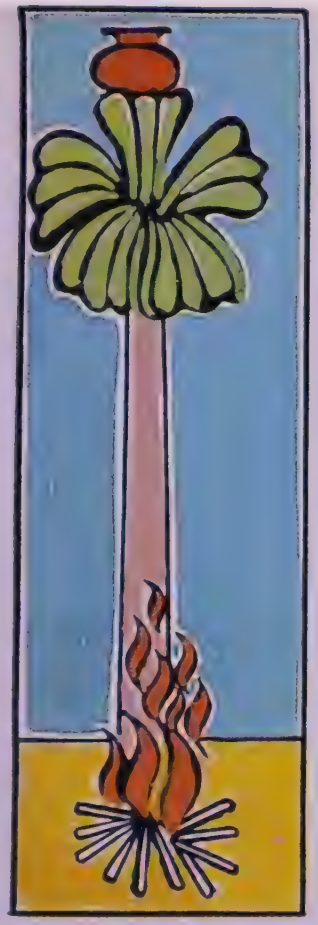
ADVICE FROM RESEARCHERS ADMINISTRATORS PROGRAMME OFFICERS

INTEGRATED PROGRAMME AND SHARE RESOURCES

HEALTH ADMINISTRATIVE LEVEL

DTP : MANPOWER DEVELOPMENT

At the pheripheral service-delivery level, the PHIs generally do not function in the expected manner, even when the supply problems are taken care of, mainly because of lack of knowledge or orientation. The lack of knowledge may not allow the programme tasks being performed in the given area. Further, even if the knowledge is imparted during the implementation visit and a working manual is supplied, such knowledge may not, infact, be made use of. The workers keep on lapsing to ignorance. This has to be constantly corrected by regular supervision by the DTO, to inculcate the habit of following the standard procedures through **constant training and updating at all levels.**



DOCTORS AND PARAMEDICALS

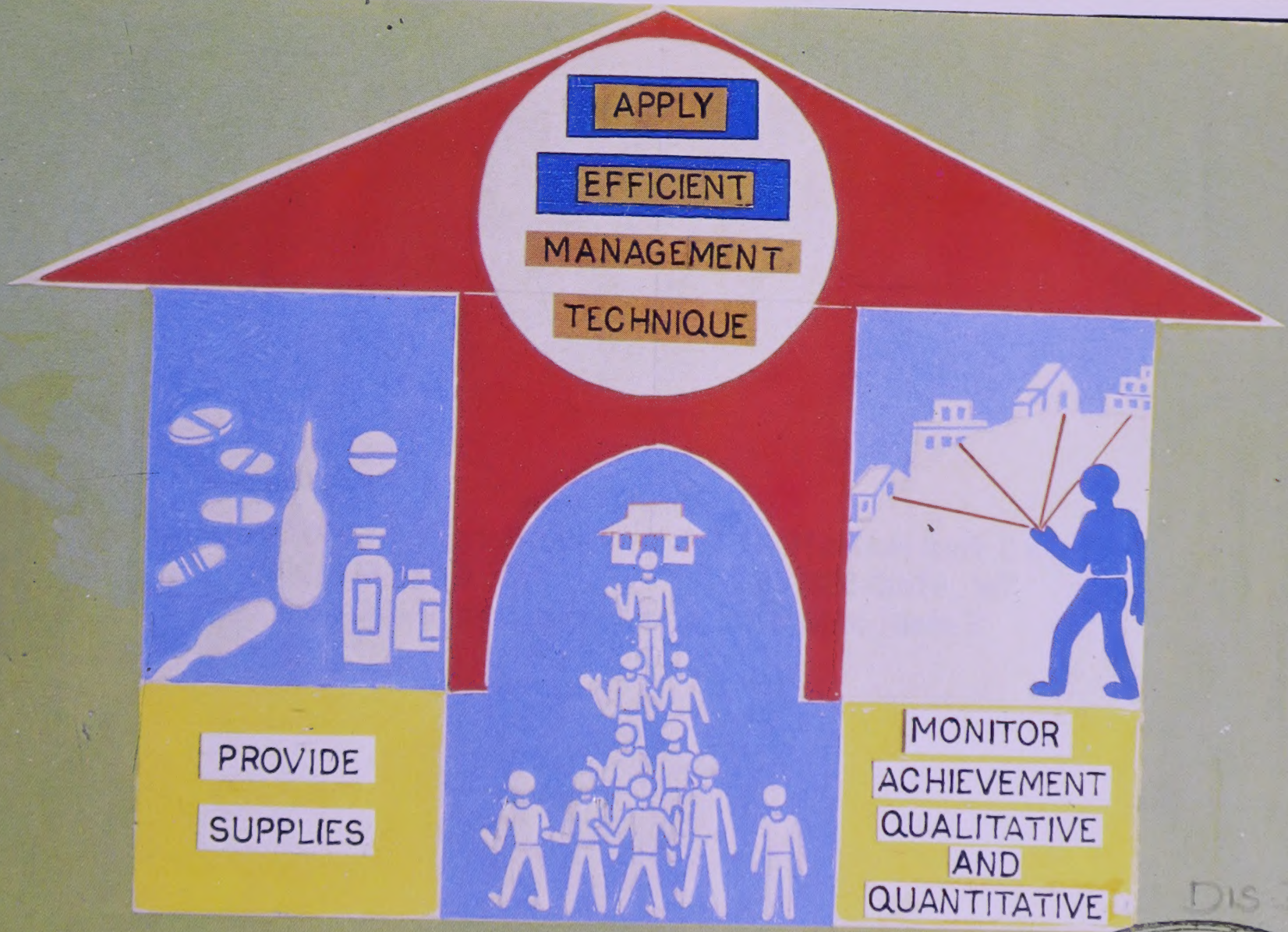
- INITIAL LACK OF KNOWLEDGE AND SKILL FOR CASE FINDING AND TREATMENT UNDER TB PROGRAMME

- EVEN AFTER ON-THE-JOB-TRAINING, PROCEDURES FORGOTTEN, MANUALS NOT USED

CONTINUOUS SUPERVISION AS PER

DTP : PROGRAMME MONITORING

Apart from ensuring the practice of recommended procedures by staff at all levels, through constant supervision and on the job training, DTO has to maintain the supplies. He has to insist on regular reporting. The reports received from the PHIs are studied by the DTO/higher levels, to find out the deficiencies, both in the availability of resources as well as in their performance. Based on these, corrective actions are taken (monitoring). Only quantitative monitoring is carried out through reports. For qualitative monitoring, periodic supervision is essential. In fact, the DTP happens to be a system. **Its efficiency can be achieved only by application of sound administrative techniques, as in any other system.** Supervision at the periphery and programme monitoring are recently strengthened in some pilot areas in India, through a subdistrict unit called Tuberculosis Unit (TU).



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